

STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

July 13, 2011

Irwin Kishner Herman Kishner Trust 294 Convention Center Drive Las Vegas, NV 89109

Maryland Square Shopping Center, LLC c/o Tim Swickard
Dongell Lawrence Finney LLP
770 L St., Suite 950
Sacramento, CA 95814

Subject:

Draft Chemical Oxidation Contingency Plan for Soil, Maryland Square Shopping Center

Facility:

Al Phillips the Cleaner (former)

3661 S. Maryland Parkway

Las Vegas, NV

Facility ID: H-000086

Dear Mr. Kishner and Mr. Swickard:

On July 8, 2011, the Nevada Division of Environmental Protection (NDEP) received the *Draft Chemical Oxidation Contingency Plan for Soil*, prepared by Tetra Tech on behalf of the Herman Kishner Trust (Trust) and Maryland Square Shopping Center, LLC. (MSSC). This contingency plan was prepared in response to a NDEP comment letter dated October 27, 2010 on the Draft Soil Corrective Action Plan for Source Area Soil. Specifically, the letter stated that:

The NDEP requests a contingency plan to evaluate and respond to some of the common problems resulting from in situ injections. Safety and environmental concerns with the use of oxidants include issues such as (1) desorption and mobilization of contaminants, (2) displacement of contaminated groundwater into previously clean areas, (3) alteration and mobilization of naturally occurring constituents (e.g., trivalent chromium oxidized to the more mobile and toxic hexavalent chromium), (4) precipitation of mineral phases that occlude porosity and permeability of the soil, (5) explosive exothermic reaction, (6) unexpected breakthrough of injectate, and (7) damage to utilities and buried infrastructure, among other concerns. Effects of in situ chemical oxidation are only somewhat predictable, and if problems arise, it may prove more costly than excavation. Concerns, possible complications of, and contingency plans for in situ chemical oxidation need to be evaluated.

The NDEP has reviewed the *Draft Chemical Oxidation Contingency Plan for Soil* and provides the following comments.



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1. <u>Section 2.2</u> states "However, no target action level has been established for PCE concentration in saturated soil or groundwater."

The NDEP notes that the "target action level" for groundwater is the maximum contaminant level (MCL) of 5 micrograms per liter (μ g/L). The concentration of tetrachloroethylene (PCE) in groundwater serves as a representation of the concentration of PCE in saturated soils, so an action level for these soils is not specified.

2. Section 3.0 states "Change in PCE concentration versus time will serve as a measure of remedial progress. A decreasing trend will indicate that the remedy is working, PCE concentration in the treatment zone is expected to decrease initially, and then to increase gradually as oxidant concentrations decrease and PCE desorbs from the soil." Also, "Because no action levels are to be specified, oxidant application will be considered a success if dissolved PCE concentration decreases over time (indicating a decrease in source area mass)."

The NDEP requests that the Trust provide a description of an acceptable statistical test (or other method) that will be used to demonstrate <u>quantitatively</u> that PCE concentrations are decreasing after the remedy has been implemented. Include the range of sampling date that will be included in the analysis (e.g., data collected from 2nd Quarter, 2007 through 2nd Quarter, 2011). Also, see previous comment regarding the specified "target action level" for PCE in groundwater.

The plan should also list a selection of which monitoring wells will be sampled and the proposed sampling frequency of these wells. The NDEP notes that, to adequately monitor the effects of the remedy, the sampling frequency would need to be modified for monitoring wells in and near the source area, because these wells are currently sampled only annually or semi-annually (see Attachment 1 of NDEP's February 3, 2011 letter, table reproduced below, with wells shown in bold-face font.)

| Annual | MW-3, MW-7, MW-8 , MW-10, MW-11, MW-12, MW-15, MW-16, MW-21, MW-22, MW-24 |
|-------------|---|
| Semi-annual | MW-1, MW-2, MW-5, MW-6, MW-9, MW-13, MW-14, MW-17, MW-28, MW-29 |
| Quarterly | MW-18, MW-19, MW-20, MW-23, MW-25, MW-26, MW-27, MW-30; MW-31; MW-32, MW-33 |

Bold-face font indicates wells in the source area or just east of S. Maryland Pkwy (and west of the western parking garage at the mall)

NDEP Requirements

Please provide a revised contingency plan that includes a discussion of the metrics that will be used to quantitatively evaluate whether concentrations of PCE in groundwater are decreasing.

If you have any questions or require additional information regarding this letter, contact me by telephone at (775) 687-9496 or e-mail at msiders@ndep.nv.gov.

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Sincerely,

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Mary A. Siders, Ph.D.

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